

Vegetation drought in India is alarming: IIT-Indore study

Large proportions of green cover in country's every part was found to be at risk due to possible changes in climatic conditions

2/3rd of croplands face similar threat, which may affect country's food security

At least half of forests and croplands in 16 out of 24 river basins are prone to drying due to low soil moisture level

River basins in north western regions found to be most threatened as vegetation in more than 80 per cent area of Mahi, Luni and Sabarmati river basins showed very high chances of drying

Area-wise, Ganga basin is most vulnerable. Pennar river basin likely to face vegetation droughts due to soil moisture level depletion

OUR STAFF REPORTER
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More than 50 per cent of every forest in India is highly vulnerable to climate change, according to a study done by Indian Institute of Technology Indore.

"The study aimed at understanding the complex vegetation-climatic interaction at all India scale provides useful insights to policy makers about risk and resilience of country's green cover against changing climatic conditions," said IIT Indore media coordinator Rahul Sharma.

Depletion of green cover due to changing temperatures, precipitation and low soil moisture content are reasons for vegetation drought. The study was undertaken in all 24 major river basins and all 10 major vegetation/land cover types for detailed analysis. "The results

indicate a possible emergence of a very alarming situation," a press release issued by IIT Indore said.

"Large portion of green cover in every part of country was found to be at risk due to possible changes in climatic conditions. Most importantly, two-third of country's total croplands face similar threat, which is of paramount concern for country's food security," the release stated.

At least half of forests and croplands in 16 out of 24 river basins are prone to drying due to low soil moisture levels. River basins in north western regions are most threatened as vegetation in more than 80 per cent area in Mahi, Luni and Sabarmati river basins showed "very high chances of drying."

Ganga basin is most vulnerable as 25 per cent of its area is highly drought-

prone. In south, Pennar river basin is likely to suffer from vegetation droughts due to deterioration in soil moisture levels. Cauveri, Tapti and Krishna rivers are also unsafe from drought risks.

POSSIBILITY TO RECOVER

The study suggests that forests and croplands in at least one-third area of 18 out of 24 river basins may not sustain changes. It means drying in these regions may last longer than usual.

Deciduous forests that mostly depend on monsoon are most widespread in country. It was found that a possible dry condition is capable of altering more than 65 per cent of deciduous vegetation. Irrespective of its type, more than half of every vegetation cover was

found to be poorly capable of fighting water shortage.

EVERGREEN FORESTS

The evergreen forests, which are found in high precipitation zones such as north-east and Western Ghats remain green throughout the year. However, IIT Indore and IIT Guwahati researchers found that evergreen needle leaf and evergreen broad leaf forests were unable to recover from driest conditions and 50 to 60 per cent of these forest types showed non-resilience.

STEPS NEEDED

These studies strengthen argument that India needs to take urgent, more detailed investigations on climate change and devise systems to mitigate its consequences.

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